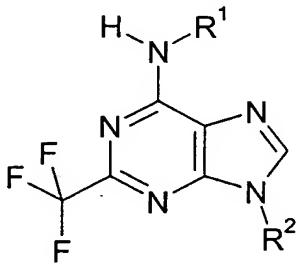
What Is Claimed is:

1. A compound of Formula I:



I

wherein,

R^1 is H,

alkyl having 1 to 5 carbon atoms, which is unsustituted or substituted one or more times by halogen, hydroxy, or combinations thereof, and wherein a $-CH_2-$ group can be optionally replaced by -O-, -S-, or -NH-,

cycloalkyl having 3 to 6 carbon atoms, or

cycloalkylalkyl having 4 to 7 C atoms;

R^2 is alkyl having 1 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano or combinations thereof, wherein one or more $-CH_2-$ groups is each independently optionally replaced by -O-, -S-, or -NH-, and wherein optionally one or more $-CH_2CH_2-$ groups is replaced in each case by –CH=CH- or -C≡C-,

alkyl ether having 3 to 12 carbon atoms,

cycloalkyl having 3 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano or combinations thereof,

cycloalkylalkyl having 4 to 12 C atoms, which is unsubstituted or substituted one or more times by C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano, halogen, or combinations thereof,

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aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

arylalkyl having 7 to 16 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heteroarylalkyl wherein the heteroaryl portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heteroaryl portion is unsubstituted or is substituted one or more times in by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

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heterocycle having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof,

heterocycle-alkyl wherein the heterocycle portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heterocycle portion is nonarmoatic and is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof, or

carbocycle which is nonaromatic, monocyclic or bicyclic, group having 5 to 14 carbon atoms, which is unsubstituted or is substituted one or more times in the by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof;

and

pharmaceutically acceptable salts thereof,

with the provisos that:

(a) when R^1 is methyl, then R^2 is not arylalkyl, heteroarylalkyl, 2-(1,2,3,4-tetrahydro)quinolinyl-methyl, methyl or 2-butyl;

(b) when R^1 is cyclopropyl, R^2 is not 4-methylbenzyl;

(c) when R^1 is ethyl, then R^2 is not ethyl, 3-aminobenzyl, 2-thienylmethyl, 3-thienylmethyl, or 2-pyridylmethyl;

(d) when R^1 is cyclopropyl, then R^2 is not cyclopropylmethyl;

(e) when R^1 is H, then R^2 is not methyl, ethyl, benzyl, 4-methylbenzyl, or substituted tetrahydrofuranyl;

(f) when R^1 is methoxyethyl, then R^2 is not benzyl, 3-dimethylaminobenzyl, or 3-thienylmethyl;

(g) when R^1 is iso-butyl, then R^2 is not benzyl; and

(h) when R^1 is n-butyl, then R^2 is not n-butyl.

2. A compound according to claim 1, wherein when R^1 is methyl, R^2 is not arylalkyl, heteroarylalkyl, 2-(1,2,3,4-tetrahydro)quinolinyl-methyl or C_{1-5}-alkyl.

3. A compound according to claim 1, wherein R^1 is alkyl.

4. A compound according to claim 1, wherein R^1 is cycloalkyl.

5. A compound according to claim 1, wherein R^1 is cycloalkylalkyl.

6. A compound according to claim 1, wherein R^2 is alkyl.

7. A compound according to claim 1, wherein R^2 is alkyl ether.

8. A compound according to claim 1, wherein R^2 is cycloalkyl.

9. A compound according to claim 1, wherein R^2 is aryl.

10. A compound according to claim 1, wherein R^2 is arylalkyl.

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11. A compound according to claim 1, wherein R^2 is heteroaryl.

12. A compound according to claim 1, wherein R^2 is heteroarylalkyl.

13. A compound according to claim 1, wherein R^2 heterocycle.

14. A compound according to claim 1, wherein R^2 heterocycle-alkyl.

15. A compound according to claim 1, wherein R^2carbocycle.

16. A compound according to claim 1, wherein R^1 is alkyl, substituted alkyl, cycloalkyl or cycloalkylalkyl.

17. A compound according to claim 6, wherein R^1 is alkyl, cycloalkyl or cycloalkylalkyl.

18. A compound according to claim 7, wherein R^1 is alkyl, cycloalkyl or cycloalkylalkyl.

19. A compound according to claim 8, wherein R^1 is alkyl, cycloalkyl or cycloalkylalkyl.

20. A compound according to claim 9, wherein R^1 is alkyl, cycloalkyl or cycloalkylalkyl.

21. A compound according to claim 10, wherein R^1 is alkyl, cycloalkyl or cycloalkylalkyl.

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22. A compound according to claim 11, wherein R^1 is alkyl, cycloalkyl or cycloalkylalkyl.

23. A compound according to claim 12, wherein R^1 is alkyl, cycloalkyl or cycloalkylalkyl.

24. A compound according to claim 13, wherein R^1 is alkyl, cycloalkyl or cycloalkylalkyl.

25. A compound according to claim 14, wherein R^1 is alkyl, cycloalkyl or cycloalkylalkyl.

26. A compound according to claim 15, wherein R^1 is alkyl, cycloalkyl or cycloalkylalkyl.

27. A compound according to claim 1, wherein R^1 is methyl, ethyl, isopropyl, 2-hydroxyethyl, cyclopropyl, cyclopentyl, or cyclopropylmethyl.

28. A compound according to claim 1, wherein R^1 is methyl, ethyl, cyclopropyl, cyclobutyl, cyclopentyl or cyclohexyl.

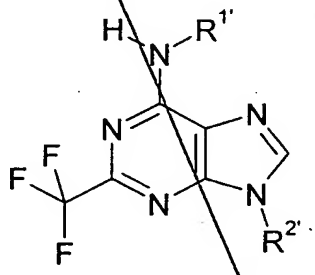
29. A compound according to claim 1, wherein R^1 is methyl, ethyl or cyclopropyl.

30. A compound according to claim 1, wherein R^2 is alkyl, arylalkyl, cycloalkyl, aryl, heteroaryl, heteroarylalkyl, or alkyl ether.

31. A compound according to claim 1, wherein R^2 is ethyl, isopropyl, butyl, tert-butyl, cyclopentyl, cyclohexyl, cycloheptyl, or arylalkyl which is unsubstituted or substituted one or more times by F, Cl, CN, CF_3, CH_3, C_2H_5, isopropyl, OCH_3, methylenedioxy, ethylenedioxy or combinations thereof.

32. A compound according to claim 1, wherein R^2 is substituted or unsubstituted benzyl, phenethyl or phenpropyl.

33. A compound of formula II



II

wherein

$R^{1'}$ is methyl, ethyl, or cyclopropyl; and

$R^{2'}$ is cycloalkyl having 3 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano or combinations thereof,

aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heterocycle having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof (e.g., piperidinyl, imidazolinyl, imidazolidinyl, pyrrolinyl, pyrrolidinyl, morpholinyl, piperazinyl, and indolinyl), or

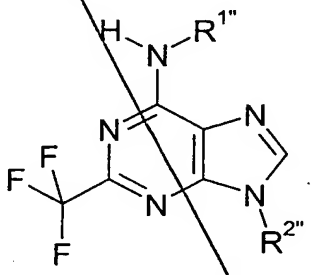
carbocycle which is nonaromatic, monocyclic or bicyclic, group having 5 to 14 carbon atoms, which is unsubstituted or is substituted one or more times in the by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-

alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof;

and

pharmaceutically acceptable salts thereof.

34. A compound of Formula III:



III

wherein

$R^{1''}$ is methyl, ethyl, or cyclopropyl; and

$R^{2''}$ is phenyl,

phenyl which is substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof, or

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, substituted heteroaryl having 5 to 10 ring atoms, in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, aryl, C_{1-4}-alkyl, C_{1-4}-alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino or combinations thereof,

or when R^1 is methyl or cyclopropyl R^2 can also be cycloalkyl having 3 to 12 carbon atoms;

and

pharmaceutically acceptable salts thereof.

35. A compound according to claim 1, wherein said compound selected from:

6-Cyclopropylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine
6-Ethylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-fluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 6-difluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 3-difluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-propyl 2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclopentyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3, 4-dimethoxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3,4-methylenedioxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-thiophenemethyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-methylphenethyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-cycloheptyl-2-trifluoromethylpurine
6-Methylamino-9-cyclopentyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclohexyl-2-trifluoromethylpurine
6-Methylamino-9-cycloheptyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclopentylmethyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-phenyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-fluorophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclobutyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-norboranane)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(1-indanyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-fluorophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-chlorophenyl)-2-trifluoromethylpurine

6-Cyclopropylamino-9-(3-thienyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-cyclopentyloxy-4-methoxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3, 4-dimethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 6-dichloro-4-pyridylmethyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-methoxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-methoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-methoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-nitrophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-methoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-cyanophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 4-dimethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-nitrobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(6-methoxy-3-pyridyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-pyridyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-pyridyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-dimethylaminophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-aminophenyl)-2-trifluoromethylpurine
6-Methylamino-9-(2, 4-dimethoxy-5-pyrimidyl)-2-trifluoromethylpurine
6-Methylamino-9-(2-methoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(4-methoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3-acetylphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3-methoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3-nitrophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-furanyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-ethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-ethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3, 4-methylenedioxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-ethoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3,4-dimethoxyphenyl)-2-trifluoromethylpurine; and

pharmaceutically acceptable salts thereof.

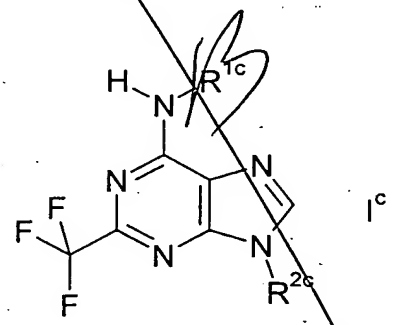
36. A compound according to claim 34, wherein said compound selected from:

6-Cyclopropylamino-9-(2,3-difluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclopentyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3,4-dimethoxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-cycloheptyl-2-trifluoromethylpurine
6-Methylamino-9-cyclopentyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclohexyl-2-trifluoromethylpurine
6-Methylamino-9-cycloheptyl-2-trifluoromethylpurine

6-Cyclopropylamino-9-phenyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-fluorophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclobutyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-norboranane)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-fluorophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-chlorophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-thienyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3, 4-dimethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 6-dichloro-4-pyridylmethyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-methoxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-methoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-methoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-nitrophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-methoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-cyanophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-nitrobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-pyridyl)-2-trifluoromethylpurine
6-Methylamino-9-(2, 4-dimethoxy-5-pyrimidyl)-2-trifluoromethylpurine
6-Methylamino-9-(4-methoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3-acetylphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3-methoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3-nitrophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-ethoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3,4-dimethoxyphenyl)-2-trifluoromethylpurine; and

pharmaceutically acceptable salts thereof.

37. A method for enhancing cognition in a patient in whom such enhancement is desired comprising administering to said patient an effective amount of a compound according to formula I^c:



I^c

wherein,

R^{1c} is H,

alkyl having 1 to 5 carbon atoms, which is unsustituted or substituted one or more times by halogen, hydroxy, or combinations thereof, and wherein a $-CH_2-$ group can be optionally replaced by -O-, -S-, or -NH-,

cycloalkyl having 3 to 6 carbon atoms, or

cycloalkylalkyl having 4 to 7 C atoms;

R^{2c} is alkyl having 1 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano or combinations thereof, wherein one or more $-CH_2-$ groups is each independently optionally replaced by -O-, -S-, or -NH-, and wherein optionally one or more $-CH_2CH_2-$ groups is replaced in each case by –CH=CH- or -C≡C-

alkyl ether having 3 to 12 carbon atoms,

cycloalkyl having 3 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano or combinations thereof,

cycloalkylalkyl having 4 to 12 C atoms, which is unsubstituted or substituted one or more times by C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano, halogen, or combinations thereof,

aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4}

alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

arylalkyl having 7 to 16 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl;or combinations thereof,

heteroarylalkyl wherein the heteroaryl portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heteroaryl portion is unsubstituted or is substituted one or more times in by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heterocycle having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof,

heterocycle-alkyl wherein the heterocycle portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heterocycle portion is nonarmoatic and is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof , or

carbocycle which is nonaromatic, monocyclic or bicyclic, group having 5 to 14 carbon atoms, which is unsubstituted or is substituted one or more times in the by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof;

and

pharmaceutically acceptable salts thereof,

with the proviso that said compound is not 6-methylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine.

38. A method according to claim 37, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

39. A method according to claim 37, wherein said patient is a human.

40. A method according to claim 37, wherein said compound selected from:

6-Cyclopropylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine;
6-Ethylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-fluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 6-difluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 3-difluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-propyl 2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclopentyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3, 4-dimethoxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3,4-methylenedioxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-thiophenemethyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-methylphenethyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclopropylmethyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-cycloheptyl-2-trifluoromethylpurine
6-Methylamino-9-cyclopentyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclohexyl-2-trifluoromethylpurine
6-Methylamino-9-cycloheptyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclopentylmethyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-phenyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-fluorophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclobutyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-norboranane)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(1-indanyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-fluorophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-chlorophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-tolyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-thienyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-cyclopentyloxy-4-methoxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3, 4-dimethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 6-dichloro-4-pyridylmethyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-methoxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-methoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-methoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-nitrophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-methoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-cyanophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 4-dimethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-nitrobenzyl)-2-trifluoromethylpurine

6-Cyclopropylamino-9-(6-methoxy-3-pyridyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-pyridyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-pyridyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-dimethylaminophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-aminophenyl)-2-trifluoromethylpurine
6-Methylamino-9-(2, 4-dimethoxy-5-pyrimidyl)-2-trifluoromethylpurine
6-Methylamino-9-(2-methoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(4-methoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3-acetylphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3-methoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3-nitrophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-furanyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-ethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-ethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3, 4-methylenedioxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-ethoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3,4-dimethoxyphenyl)-2-trifluoromethylpurinep; and
pharmaceutically acceptable salts thereof.

41. A method according to claim 40, wherein said patient is a human.

42. A method according to claim 41, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

43. A method according to claim 37, wherein when R^{1c} is methyl, then R^{2c} is not arylalkyl, methyl or 2-butyl, and when R^{1c} is H, then R^{2c} is not benzyl.

44. A method according to claim 37, wherein:

(a) when R^{1c} is methyl, then R^{2c} is not arylalkyl, heteroarylalkyl, 2-(1,2,3,4-tetrahydro)quinolinyl-methyl, methyl or 2-butyl;

(b) when R^{1c} is cyclopropyl, R^{2c} is not 4-methylbenzyl;

(c) when R^{1c} is ethyl, then R^{2c} is not ethyl, 3-aminobenzyl, 2-thienylmethyl, 3-thienylmethyl, or 2-pyridylmethyl;

(d) when R^{1c} is cyclopropyl, then R^{2c} is not cyclopropylmethyl;

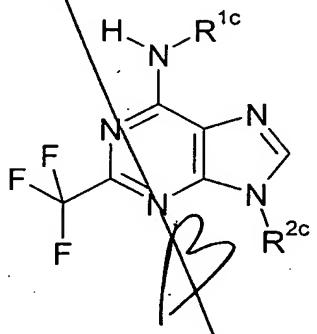
(e) when R^{1c} is H, then R^{2c} is not methyl, ethyl, benzyl, 4-methylbenzyl, or substituted tetrahydrofuranyl;

(f) when R^{1c} is methoxyethyl, then R^{2c} is not benzyl, 3-dimethylaminobenzyl, or 3-thienylmethyl;

(g) when R^{1c} is iso-butyl, then R^{2c} is not benzyl; and

(h) when R^{1c} is n-butyl, then R^{2c} is not n-butyl.

45. A method of treating a patient suffering from cognition impairment or decline comprising administering to said patient an effective amount of a compound according to formula I^c:



I^c

wherein,

R^{1c} is H,

alkyl having 1 to 5 carbon atoms, which is unsustituted or substituted one or more times by halogen, hydroxy, or combinations thereof, and wherein a $-CH_2-$ group can be optionally replaced by -O-, -S-, or -NH-,

cycloalkyl having 3 to 6 carbon atoms, or

cycloalkylalkyl having 4 to 7 C atoms;

R^{2c} is alkyl having 1 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano or combinations thereof, wherein one or

more $-CH_2-$ groups is each independently optionally replaced by -O-, -S-, or -NH-, and wherein optionally one or more $-CH_2CH_2-$ groups is replaced in each case by –CH=CH- or -C≡C-

alkyl ether having 3 to 12 carbon atoms,

cycloalkyl having 3 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano or combinations thereof,

cycloalkylalkyl having 4 to 12 C atoms, which is unsubstituted or substituted one or more times by C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano, halogen, or combinations thereof,

aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

arylalkyl having 7 to 16 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heteroarylalkyl wherein the heteroaryl portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heteroaryl portion is unsubstituted or is substituted one or more times in by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heterocycle having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof,

heterocycle-alkyl wherein the heterocycle portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heterocycle portion is nonarmoatic and is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof ,or

carbocycle which is nonaromatic, monocyclic or bicyclic, group having 5 to 14 carbon atoms, which is unsubstituted or is substituted one or more times in the by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof;

and

pharmaceutically acceptable salts thereof,

with the proviso that said compound is not 6-methylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine.

46. A method according to claim 45, wherein said patient is a human.

47. A method according to claim 46, wherein said patient is suffering from memory impairment.

48. A method according to claim 45, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

49. A method according to claim 45, wherein said patient is suffering from memory impairment due to Alzheimer's disease, schizophrenia, Parkinson's disease, Huntington's disease, Pick's disease, Creutzfeld-Jakob disease, depression, aging, head trauma, stroke, CNS hypoxia, cerebral senility, multiinfarct dementia, HIV or cardiovascular disease.

50.

51. A method according to claim 45, wherein said compound selected from:

6-Cyclopropylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine
6-Methylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine
6-Ethylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-fluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 6-difluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 3-difluorobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-propyl 2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclopentyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3, 4-dimethoxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3,4-methylenedioxybenzyl)-2- trifluoromethylpurine
6-Cyclopropylamino-9-(3-thiophenemethyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-methylphenethyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclopropylmethyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-cycloheptyl-2-trifluoromethylpurine
6-Methylamino-9-cyclopentyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclohexyl-2-trifluoromethylpurine
6-Methylamino-9-cycloheptyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclopentylmethyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-phenyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-fluorophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-cyclobutyl-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-norboranane)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(1-indanyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-fluorophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-chlorophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-tolyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-thienyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-cyclopentyloxy-4-methoxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3, 4-dimethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 6-dichloro-4-pyridylmethyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-methoxybenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-methoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-methoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-nitrophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-methoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-cyanophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2, 4-dimethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-nitrobenzyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(6-methoxy-3-pyridyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-pyridyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-pyridyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-dimethylaminophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-aminophenyl)-2-trifluoromethylpurine
6-Methylamino-9-(2, 4-dimethoxy-5-pyrimidyl)-2-trifluoromethylpurine
6-Methylamino-9-(2-methoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(4-methoxyphenyl)-2-trifluoromethylpurine

6-Methylamino-9-(3-acetylphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3-methoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3-nitrophenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-furanyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(4-ethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(2-ethoxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3, 4-methylenedioxyphenyl)-2-trifluoromethylpurine
6-Cyclopropylamino-9-(3-ethoxyphenyl)-2-trifluoromethylpurine
6-Methylamino-9-(3,4-dimethoxyphenyl)-2-trifluoromethylpurinep; and pharmaceutically acceptable salts thereof.

Sub B1

S1

52. A method according to claim 51, wherein said patient is a human.

S2

53. A method according to claim 45, wherein when R^{1c} is methyl, then R^{2c} is not arylalkyl, methyl or 2-butyl, and when R^{1c} is H, then R^{2c} is not benzyl

S3

54. A method according to claim 45, wherein:

(a) when R^{1c} is methyl, then R^{2c} is not arylalkyl, heteroarylalkyl, 2-(1,2,3,4-tetrahydro)quinolinyl-methyl, methyl or 2-butyl;

(b) when R^{1c} is cyclopropyl, R^{2c} is not 4-methylbenzyl;

(c) when R^{1c} is ethyl, then R^{2c} is not ethyl, 3-aminobenzyl, 2-thienylmethyl, 3-thienylmethyl, or 2-pyridylmethyl;

(d) when R^{1c} is cyclopropyl, then R^{2c} is not cyclopropylmethyl;

(e) when R^{1c} is H, then R^{2c} is not methyl, ethyl, benzyl, 4-methylbenzyl, or substituted tetrahydrofuranyl;

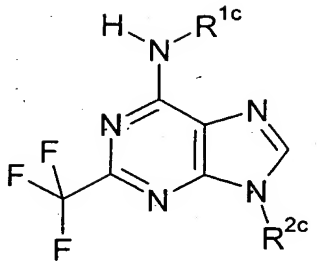
(f) when R^{1c} is methoxyethyl, then R^{2c} is not benzyl, 3-dimethylaminobenzyl, or 3-thienylmethyl;

(g) when R^{1c} is iso-butyl, then R^{2c} is not benzyl; and

(h) when R^{1c} is n-butyl, then R^{2c} is not n-butyl.

R.1.126 S4

56. A method for treating a patient having a disease involving decreased cAMP levels comprising administering to said patient an effective amount of a compound according to formula I^c:



Ic

wherein,

R^{1c} is H,

alkyl having 1 to 5 carbon atoms, which is unsustituted or substituted one or more times by halogen, hydroxy, or combinations thereof, and wherein a $-CH_2-$ group can be optionally replaced by -O-, -S-, or -NH-,

cycloalkyl having 3 to 6 carbon atoms, or

cycloalkylalkyl having 4 to 7 C atoms;

R^{2c} is alkyl having 1 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano or combinations thereof, wherein one or more $-CH_2-$ groups is each independently optionally replaced by -O-, -S-, or -NH-, and wherein optionally one or more $-CH_2CH_2-$ groups is replaced in each case by –CH=CH- or -C≡C-

alkyl ether having 3 to 12 carbon atoms,

cycloalkyl having 3 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano or combinations thereof,

cycloalkylalkyl having 4 to 12 C atoms, which is unsubstituted or substituted one or more times by C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano, halogen, or combinations thereof,

Sub B1

aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

arylalkyl having 7 to 16 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heteroarylalkyl wherein the heteroaryl portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heteroaryl portion is unsubstituted or is substituted one or more times in by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

Sub B1

heterocycle having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof,

heterocycle-alkyl wherein the heterocycle portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heterocycle portion is nonarmoatic and is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof ,or

carbocycle which is nonaromatic, monocyclic or bicyclic, group having 5 to 14 carbon atoms, which is unsubstituted or is substituted one or more times in the by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic

acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof;

and

pharmaceutically acceptable salts thereof,

with the proviso that said compound is not 6-methylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine.

57. A method according to claim 56, wherein when R^{1c} is methyl, then R^{2c} is not arylalkyl, methyl or 2-butyl, and when R^{1c} is H, then R^{2c} is not benzyl

58. A method according to claim 56, wherein:

(a) when R^{1c} is methyl, then R^{2c} is not arylalkyl, heteroarylalkyl, 2-(1,2,3,4-tetrahydro)quinolinyl-methyl, methyl or 2-butyl;

(b) when R^{1c} is cyclopropyl, R^{2c} is not 4-methylbenzyl;

(c) when R^{1c} is ethyl, then R^{2c} is not ethyl, 3-aminobenzyl, 2-thienylmethyl, 3-thienylmethyl, or 2-pyridylmethyl;

(d) when R^{1c} is cyclopropyl, then R^{2c} is not cyclopropylmethyl;

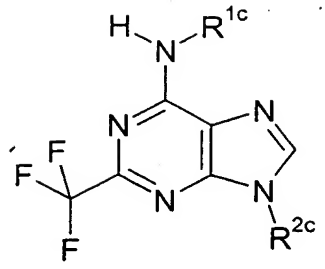
(e) when R^{1c} is H, then R^{2c} is not methyl, ethyl, benzyl, 4-methylbenzyl, or substituted tetrahydrofuranyl;

(f) when R^{1c} is methoxyethyl, then R^{2c} is not benzyl, 3-dimethylaminobenzyl, or 3-thienylmethyl;

(g) when R^{1c} is iso-butyl, then R^{2c} is not benzyl; and

(h) when R^{1c} is n-butyl, then R^{2c} is not n-butyl.

59. A method of inhibiting PDE4 enzyme activity in a patient comprising administering to said patient an effective amount of a compound according to formula I^c:



Ic

wherein,

R^{1c} is H,

alkyl having 1 to 5 carbon atoms, which is unsustituted or substituted one or more times by halogen, hydroxy, or combinations thereof, and wherein a $-CH_2-$ group can be optionally replaced by -O-, -S-, or -NH-,

cycloalkyl having 3 to 6 carbon atoms, or

cycloalkylalkyl having 4 to 7 C atoms;

R^{2c} is alkyl having 1 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano or combinations thereof, wherein one or more $-CH_2-$ groups is each independently optionally replaced by -O-, -S-, or -NH-, and wherein optionally one or more $-CH_2CH_2-$ groups is replaced in each case by –CH=CH- or -C≡C-

alkyl ether having 3 to 12 carbon atoms,

cycloalkyl having 3 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano or combinations thereof,

cycloalkylalkyl having 4 to 12 C atoms, which is unsubstituted or substituted one or more times by C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano, halogen, or combinations thereof,

aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

arylalkyl having 7 to 16 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heteroarylalkyl wherein the heteroaryl portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heteroaryl portion is unsubstituted or is substituted one or more times in by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

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heterocycle having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof,

heterocycle-alkyl wherein the heterocycle portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heterocycle portion is nonarmoatic and is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof,or

carbocycle which is nonaromatic, monocyclic or bicyclic, group having 5 to 14 carbon atoms, which is unsubstituted or is substituted one or more times in the by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic

acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof;

and

pharmaceutically acceptable salts thereof,

with the proviso that said compound is not 6-methylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine.

60. A method according to claim 59, wherein when R^{1c} is methyl, then R^{2c} is not arylalkyl, methyl or 2-butyl, and when R^{1c} is H, then R^{2c} is not benzyl

61. A method according to claim 59, wherein:

(a) when R^{1c} is methyl, then R^{2c} is not arylalkyl, heteroarylalkyl, 2-(1,2,3,4-tetrahydro)quinolinyl-methyl, methyl or 2-butyl;

(b) when R^{1c} is cyclopropyl, R^{2c} is not 4-methylbenzyl;

(c) when R^{1c} is ethyl, then R^{2c} is not ethyl, 3-aminobenzyl, 2-thienylmethyl, 3-thienylmethyl, or 2-pyridylmethyl;

(d) when R^{1c} is cyclopropyl, then R^{2c} is not cyclopropylmethyl;

(e) when R^{1c} is H, then R^{2c} is not methyl, ethyl, benzyl, 4-methylbenzyl, or substituted tetrahydrofuranyl;

(f) when R^{1c} is methoxyethyl, then R^{2c} is not benzyl, 3-dimethylaminobenzyl, or 3-thienylmethyl;

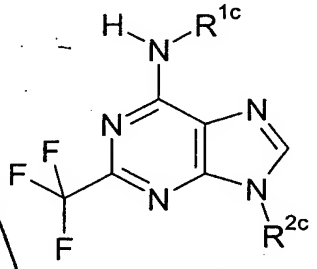
(g) when R^{1c} is iso-butyl, then R^{2c} is not benzyl; and

(h) when R^{1c} is n-butyl, then R^{2c} is not n-butyl.

62. A pharmaceutical composition comprising a compound according to claim 1 and a pharmaceutically acceptable carrier.

63. A composition according to claim 62, wherein said composition contains 0.1-50 mg of said compound.

64. A method of treating a patient suffering from memory impairment due to a neurodegenerative disease comprising administering to said patient an effective amount of a compound according to formula I^c:



I^c

wherein,

R^{1c} is H,

alkyl having 1 to 5 carbon atoms, which is unsustituted or substituted one or more times by halogen, hydroxy, or combinations thereof, and wherein a $-CH_2-$ group can be optionally replaced by -O-, -S-, or -NH-,

cycloalkyl having 3 to 6 carbon atoms, or

cycloalkylalkyl having 4 to 7 C atoms;

R^{2c} is alkyl having 1 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano or combinations thereof, wherein one or more $-CH_2-$ groups is each independently optionally replaced by -O-, -S-, or -

NH-, and wherein optionally one or more $-CH_2CH_2-$ groups is replaced in each case by –CH=CH- or -C≡C-

alkyl ether having 3 to 12 carbon atoms,

cycloalkyl having 3 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano or combinations thereof,

cycloalkylalkyl having 4 to 12 C atoms, which is unsubstituted or substituted one or more times by C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano, halogen, or combinations thereof,

aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

arylalkyl having 7 to 16 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom,

which is unsubstituted or substituted one or more times by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heteroarylalkyl wherein the heteroaryl portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heteroaryl portion is unsubstituted or is substituted one or more times in by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heterocycle having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof,

heterocycle-alkyl wherein the heterocycle portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heterocycle portion is nonarmoatic and is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof,or

carbocycle which is nonaromatic, monocyclic or bicyclic, group having 5 to 14 carbon atoms, which is unsubstituted or is substituted one or more times in the by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof;

and

pharmaceutically acceptable salts thereof,

with the proviso that said compound is not 6-methylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine.

63 ~~65~~. A method according to claim 64, wherein when R^{1c} is methyl, then R^{2c} is not arylalkyl, methyl or 2-butyl, and when R^{1c} is H, then R^{2c} is not benzyl

64 ~~66~~. A method according to claim 64, wherein:

(a) when R^{1c} is methyl, then R^{2c} is not arylalkyl, heteroarylalkyl, 2-(1,2,3,4-tetrahydro)quinolinyl-methyl, methyl or 2-butyl;

(b) when R^{1c} is cyclopropyl, R^{2c} is not 4-methylbenzyl;

(c) when R^{1c} is ethyl, then R^{2c} is not ethyl, 3-aminobenzyl, 2-thienylmethyl, 3-thienylmethyl, or 2-pyridylmethyl;

(d) when R^{1c} is cyclopropyl, then R^{2c} is not cyclopropylmethyl;

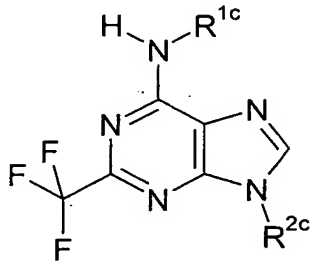
(e) when R^{1c} is H, then R^{2c} is not methyl, ethyl, benzyl, 4-methylbenzyl, or substituted tetrahydrofuranyl;

(f) when R^{1c} is methoxyethyl, then R^{2c} is not benzyl, 3-dimethylaminobenzyl, or 3-thienylmethyl;

(g) when R^{1c} is iso-butyl, then R^{2c} is not benzyl; and

(h) when R^{1c} is n-butyl, then R^{2c} is not n-butyl.

65 67. A method of treating a patient suffering from memory impairment due to an acute neurodegenerative disorder comprising administering to said patient an effective amount of a compound according to formula I^c:



I^c

wherein,

R^{1c} is H,

alkyl having 1 to 5 carbon atoms, which is unsustituted or substituted one or more times by halogen, hydroxy, or combinations thereof, and wherein a $-CH_2-$ group can be optionally replaced by -O-, -S-, or -NH-,

cycloalkyl having 3 to 6 carbon atoms, or

cycloalkylalkyl having 4 to 7 C atoms;

R^{2c} is alkyl having 1 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano or combinations thereof, wherein one or more $-CH_2-$ groups is each independently optionally replaced by -O-, -S-, or -NH-, and wherein optionally one or more $-CH_2CH_2-$ groups is replaced in each case by –CH=CH- or -C≡C-

alkyl ether having 3 to 12 carbon atoms,

cycloalkyl having 3 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano or combinations thereof,

cycloalkylalkyl having 4 to 12 C atoms, which is unsubstituted or substituted one or more times by C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano, halogen, or combinations thereof,

aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

arylalkyl having 7 to 16 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy,

cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heteroarylalkyl wherein the heteroaryl portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heteroaryl portion is unsubstituted or is substituted one or more times in by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heterocycle having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof,

heterocycle-alkyl wherein the heterocycle portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heterocycle portion is nonarmoatic and is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof,or

carbocycle which is nonaromatic, monocyclic or bicyclic, group having 5 to 14 carbon atoms, which is unsubstituted or is substituted one or more times in the by

halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof;

and

pharmaceutically acceptable salts thereof,

with the proviso that said compound is not 6-methylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine.

66 68. A method according to claim 67, wherein when R^{1c} is methyl, then R^{2c} is not arylalkyl, methyl or 2-butyl, and when R^{1c} is H, then R^{2c} is not benzyl

67 69. A method according to claim 67, wherein:

(a) when R^{1c} is methyl, then R^{2c} is not arylalkyl, heteroarylalkyl, 2-(1,2,3,4-tetrahydro)quinolinyl-methyl, methyl or 2-butyl;

(b) when R^{1c} is cyclopropyl, R^{2c} is not 4-methylbenzyl;

(c) when R^{1c} is ethyl, then R^{2c} is not ethyl, 3-aminobenzyl, 2-thienylmethyl, 3-thienylmethyl, or 2-pyridylmethyl;

(d) when R^{1c} is cyclopropyl, then R^{2c} is not cyclopropylmethyl;

(e) when R^{1c} is H, then R^{2c} is not methyl, ethyl, benzyl, 4-methylbenzyl, or substituted tetrahydrofuranyl;

(f) when R^{1c} is methoxyethyl, then R^{2c} is not benzyl, 3-dimethylaminobenzyl, or 3-thienylmethyl;

(g) when R^{1c} is iso-butyl, then R^{2c} is not benzyl; and

(h) when R^{1c} is n-butyl, then R^{2c} is not n-butyl.

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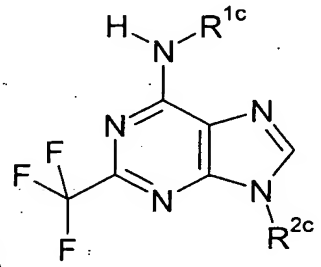
70. A method of treating a patient suffering from an allergic or inflammatory disease comprising administering to said patient an effective amount of a compound according to formula I^c:



I^c

wherein,

R^{1c} is H,

alkyl having 1 to 5 carbon atoms, which is unsustituted or substituted one or more times by halogen, hydroxy, or combinations thereof, and wherein a $-CH_2-$ group can be optionally replaced by -O-, -S-, or -NH-,

cycloalkyl having 3 to 6 carbon atoms, or

cycloalkylalkyl having 4 to 7 C atoms;

R^{2c} is alkyl having 1 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano or combinations thereof, wherein one or more $-CH_2-$ groups is each independently optionally replaced by -O-, -S-, or -NH-, and wherein optionally one or more $-CH_2CH_2-$ groups is replaced in each case by –CH=CH- or -C≡C-

alkyl ether having 3 to 12 carbon atoms,

cycloalkyl having 3 to 12 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano or combinations thereof,

cycloalkylalkyl having 4 to 12 C atoms, which is unsubstituted or substituted one or more times by C_{1-4} alkyl, halogenated C_{1-4} alkyl, C_{1-4} alkoxy, cyano, halogen, or combinations thereof,

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aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

arylalkyl having 7 to 16 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino,

carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heteroarylalkyl wherein the heteroaryl portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heteroaryl portion is unsubstituted or is substituted one or more times in by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

heterocycle having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof,

heterocycle-alkyl wherein the heterocycle portion has 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom and the alkyl portion has 1 to 3 carbon atoms, the heterocycle portion is nonarmoatic and is unsubstituted or is substituted one or more times in the by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, or combinations thereof,or

carbocycle which is nonaromatic, monocyclic or bicyclic, group having 5 to 14 carbon atoms, which is unsubstituted or is substituted one or more times in the by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4}

alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof;

and

pharmaceutically acceptable salts thereof,

with the proviso that said compound is not 6-methylamino-9-(2-fluorobenzyl)-2-trifluoromethylpurine.

71. A method according to claim 70, wherein when R^{1c} is methyl, then R^{2c} is not arylalkyl, methyl or 2-butyl, and when R^{1c} is H, then R^{2c} is not benzyl

72. A method according to claim 70, wherein:

(a) when R^{1c} is methyl, then R^{2c} is not arylalkyl, heteroarylalkyl, 2-(1,2,3,4-tetrahydro)quinolinyl-methyl, methyl or 2-butyl;

(b) when R^{1c} is cyclopropyl, R^{2c} is not 4-methylbenzyl;

(c) when R^{1c} is ethyl, then R^{2c} is not ethyl, 3-aminobenzyl, 2-thienylmethyl, 3-thienylmethyl, or 2-pyridylmethyl;

(d) when R^{1c} is cyclopropyl, then R^{2c} is not cyclopropylmethyl;

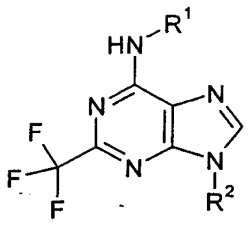
(e) when R^{1c} is H, then R^{2c} is not methyl, ethyl, benzyl, 4-methylbenzyl, or substituted tetrahydrofuranyl;

(f) when R^{1c} is methoxyethyl, then R^{2c} is not benzyl, 3-dimethylaminobenzyl, or 3-thienylmethyl;

(g) when R^{1c} is iso-butyl, then R^{2c} is not benzyl; and

(h) when R^{1c} is n-butyl, then R^{2c} is not n-butyl.

73. A process for preparing compounds of the formula IV



IV

wherein

R^1 is H,

alkyl having 1 to 5 carbon atoms, which is unsustituted or substituted one or more times by halogen, hydroxy, or combinations thereof, and wherein a $-CH_2-$ group can be optionally replaced by -O-, -S-, or -NH-,

cycloalkyl having 3 to 6 carbon atoms, or

cycloalkylalkyl having 4 to 7 C atoms; and

R^2 is aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, nitro, methylenedioxy, ethylenedioxy, amino, C_{1-4} alkylamino, di-C_{1-4}-alkylamino, C_{1-4}-hydroxyalkyl, C_{1-4}-hydroxyalkoxy, carboxy, cyano, hydroxamic acid, carboxamide, C_{2-4}-acyl, C_{2-4}-alkoxycarbonyl, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl, phenoxy, or combinations thereof,

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, aryl, C_{1-4} alkyl, halogenated C_{1-4} alkyl, hydroxy, C_{1-4}-alkoxy, halogenated C_{1-4} alkoxy, cyano, trifluoromethyl, nitro, oxo, amino, C_{1-4}-alkylamino, di-C_{1-4}-alkylamino, carboxy, alkoxycarbonyl, hydroxamic acid, carboxamide, C_{1-4}-alkylthio, C_{1-4}-alkylsulphinyl, C_{1-4}-alkylsulphonyl,or combinations thereof,

said process comprising:

reacting 6-*N*-R^1-substituted adenine with an arylboronic acid or heteroarylboronic acid in the presence of trialkylamine wherein the alkyl have 1to 5 C atoms, e.g., triethylamine, as a base, a copper catalyst, and a polar aprotic solvent, for example THF and CH_3CN (particulary,CH_3CN) at a temperature of at least 50°C, e.g., 50-60°C.

74. A compound according to claim 1, wherein R^2 is cycloalkylalkyl.

75. compound according to claim 74 wherein R^1 is alkyl, cycloalkyl or cycloalkylalkyl.